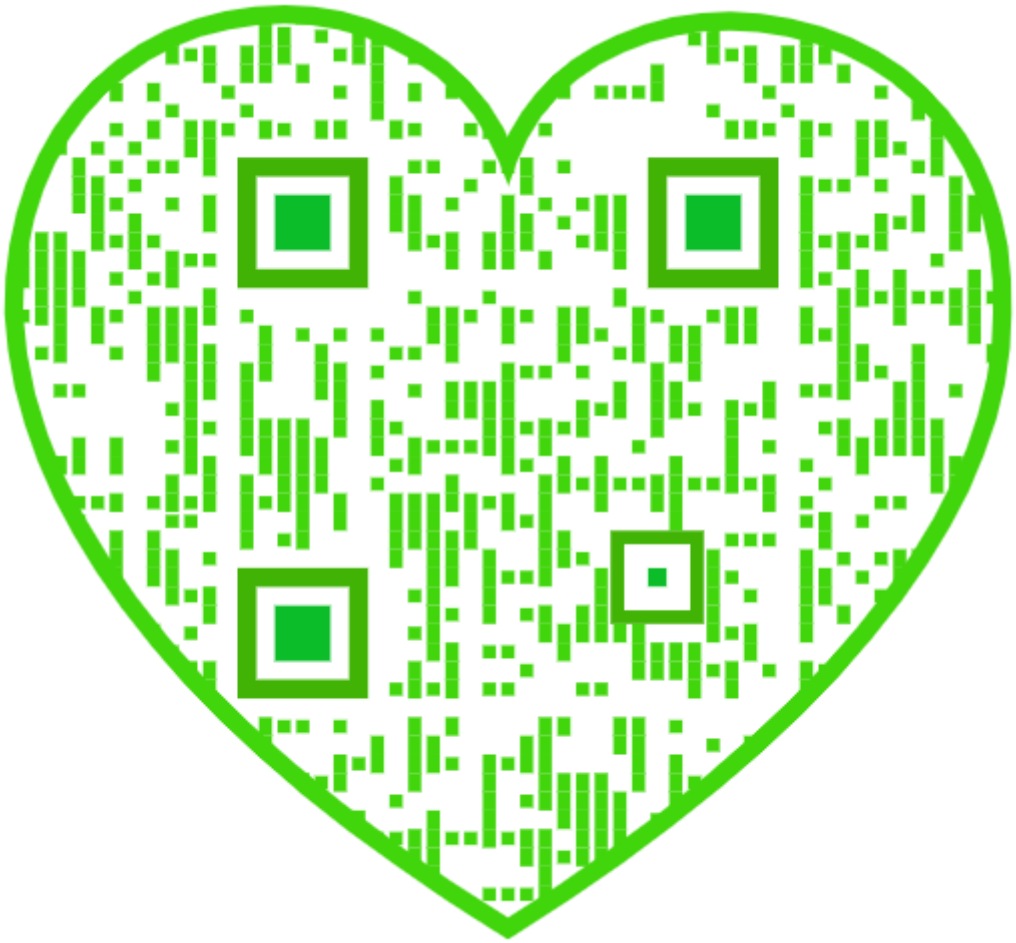
A
0013382940
THE SOUTHERN REGIONAL LIBRARY FACILITY

Rudder ON Series

Southward by the Inside Route



THE LIBRARY
OF
THE UNIVERSITY
OF CALIFORNIA
LOS ANGELES

$\frac{a^5}{5N}$

Southward

BY THE

Inside Route

BEING A DESCRIPTION OF THE PASSAGE
BETWEEN NEW YORK AND FLORIDA
BY WAY OF THE CANALS,
BAYS, SOUNDS AND
THOROUGHFARES

(Reprinted from "The Rudder")

NEW YORK AND LONDON:
THE RUDDER PUBLISHING COMPANY

1902

COPYRIGHT
BY
THE RUDDER PUBLISHING CO.
1902

PRESS OF J. Komanetsky 9 MURRAY ST., N. Y.

F106
S72

PREFACE

IN the last twenty years the practice of going south in your own boat has become popular with yachting men, and, consequently, the canals and inshore thoroughfares, which formerly were only frequented by merchant craft, have become great yachting highways. It was a lucky thing that yachtsmen took to this voyaging, as it has undoubtedly saved this route from destruction, as, owing to want of employment, portions of it—the canals especially—were being allowed to go to ruin; and the natural waters were sadly neglected by those having such things in charge.

At present things are much improved with the exception of one stretch, that included between New Brunswick and Bordentown, N. J. This canal being

550134

in the hands of the arch-enemy of all waterways, a railroad, is in bad shape, nothing being done to improve it. It is to be hoped that in the near future the Government will purchase and take this canal in charge. It should be the property of the people and be properly maintained and managed. The other canals while not gilt-edged properties, are kept in good condition, and every facility possible is offered voyagers through their gates.

This book will undoubtedly be of assistance to those who have never made the passage, but it is not to be taken as sole guide, the voyager needs and must have a full set of charts and copy of the pilot books, such as are issued by the government. And let me caution all green hands: Do not start to make this passage unless you are fully prepared in everyway, for although you may never be out of sight of land you are frequently miles away from a port, and if your boat meets with an accident, you may be delayed for days and, perhaps, weeks. Many

start off half-cocked, consequently, they get caught without the necessary stores or tools and have a hard time of it. This advice is extremely urgent to power boatmen, as they are very often held up for days owing to a small breakdown which cannot be remedied without resort to civilization. Again, do not think because you are pointing south in the autumn that you will experience soft and balmy weather. You will rarely find settled warmth until you reach the southern part of Georgia, so see to it that you are equipped with a good stove and plenty of blankets.

Digitized by the Internet Archive
in 2007 with funding from
Microsoft Corporation

http://www.archive.org/details/southwardbyinsid00ruddiala

SOUTHWARD BY THE INSIDE ROUTE

WE received many letters from readers asking for information upon the subject of the inside route to the South. I have long intended to write you what I know about this passageway, and at last, having a few idle hours and a little space, have decided to set down for your reading a general description of the long water road that leads from New York to Florida. First, let me say that the inside passage offers no difficult pilotage problems until you pass Cape Fear, and with the help of a set of those splendid charts published by the Government any man of experience and intelligence can navigate a boat from New York to Charleston without difficulty or much risk. Of course there is far more danger of wrecking or damaging a yacht in taking the

inside passage than there is in going down outside. The outside passage along the eastern seaboard is a very simple undertaking, and I much prefer that way of going to the land of the palmetto and alligator. To a sailorman the inside way is a way of tediousness and vexation, the canal boating part of the voyage being exceedingly tiresome and exasperating.

But to venture outside a man must be a bit of a navigator, have courage, weather-wiseness, and a reliable vessel. A sound, well-protected sailing yacht can make the voyage at any time without risk except such as can be properly guarded against if her skipper be sufficiently skilled in weather knowledge; but I would not go down outside in a power-boat, or advise any one else to do so. I mean by power-boat any sort of a naphtha or gasolene craft of small tonnage. All such craft are to a certain extent unreliable. You cannot depend upon their power standing by you, and if it fail at the pinch the performance is up.

But for a full-decked, water-tight cockpit sailing yacht,

the coasting trip is one of but scant danger at any time of the year, except during the winter months, when heavy winds prevail. The greatest distance between ports of shelter is not over an average forty-eight hour run, and a man who knows anything about the weather can most assuredly look that far ahead. If he cannot, then let him go down inside.

The inside waterway is made up of river, canal, bay, sound, and here and there a bit of outside navigation. The canals between New York and Beaufort, N. C., which is as far as I shall take you this time, are three in number, and conjointly of about 125 miles in distance. The first stage of the journey begins at Perth Amboy, a town which you will find in the State of New Jersey, just where Staten Island Sound (Arthur Kills) joins the Raritan Bay, which is the western end of lower New York Bay. Here a river called the Raritan enters the sea.

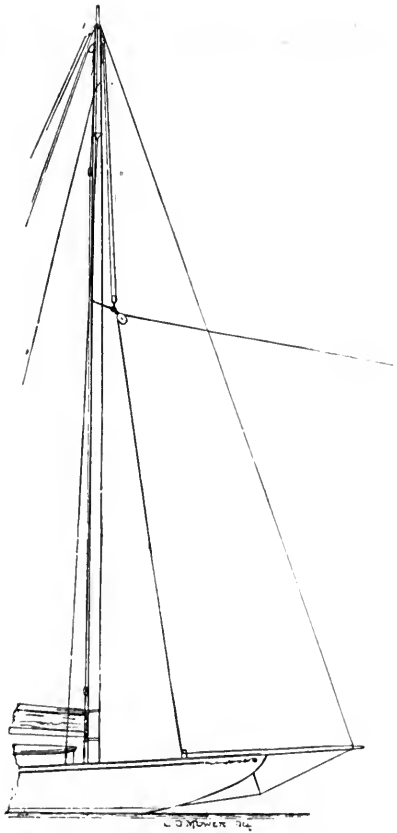
This stream is what is best described as very winding. It winds like a flattened-out corkscrew through a low meadowland for fifteen miles until it reaches the city of

New Brunswick. Its mouth is very easy to find by simply following the south shore of Staten Island, keeping a westerly course until the railroad bridge and lighthouse come into view ahead. The navigation of this stream to a boat of six feet or less draught presents no difficulties, except those often-present ones of wind and tide. I advise a stranger to negotiate its stretches with a flood tide and a southerly or easterly wind. After passing the drawbridge stand well over to the north, and keep your lead going, and you will get along all right.

After running for some time through the meadowland you will enter a reach of rocky shores clothed with trees, a sudden bend to the south and the cities' towers and chimneys heave in sight. Now make ready to enter the Delaware and Raritan Canal This canal, once an important thoroughfare before the days of the iron horse, is at present not very well kept up, and although the owners profess to have eight feet in it from end to end, I guess six is a good measure of draught for safe and rapid passage. The bridges are all draws, and you can go through

rig standing. The locks are wide and of sufficient length to take in any yacht of passageable draught.

Before going in let me give a bit of advice. No matter what kind of a boat yours is, provide her with plenty of good, stout fenders, and several blunt-ended poles from six to eight feet long. Pointed poles or hooks are not allowed, as the sides of the locks are constructed of timber. If your boat is a sailer, and has to be towed, make the following preparations for rigging the line: Make fast a stout single block to your jib or staysail halyards, securing it to the mast with a rope grommet that will freely slide up and down the spar. Reeve your tow line through this block, and then hoist it about fifteen feet aloft. The inboard end of your tow line you make fast to a pin or bitts, and the other end give into the hands of the mule-driver. The reason for rigging your tow line in this way is this: the mule team is used to towing heavy boats that just fit the lock; consequently they have learned to pull to a certain spot and then stop. This spot brings the nose of the boat right up against the



PLAN OF RIGGING TOWING LINE

forward gates. Consequently a yacht, unless she can slack up the line, is apt to get a bad bump.

By rigging your tow line in the way I have pointed out you have complete control. Just as soon as you enter the lock let a hand stand by the line and slack it up, so as to check the headway and prevent it being brought up against either the side or gate. The rest of your hands except the helmsmen can stand by with the poles and keep the yacht in the centre of the lock while the water is either rising or falling. Motor craft, having more control of their movement, are less liable to be damaged in locking, but it is a good plan to have a bucket on a rope ready to use for a backstop if the engine fails to reverse.

Before starting the mule-boy will give you directions as to which side you are to pass craft coming the other way. Follow these orders without fail, no matter what the approaching craft does. The drivers of the tows are extremely skillful, and you will have no trouble in crossing lines if you keep your boat on the right side of the ditch. There is no danger of a yacht being overtaken;

being light they travel much faster than either the towing or steaming canalers.

Now let us go back to the entrance of the canal at New Brunswick. As soon as you get there pull into the first basin and tie up. Go to the canal office, which is on the dock side, and get your pass. The price of canalage is not heavy; it may roughly be put at about 75 cents a ton for small yachts. After getting your pass, if you have a sailing yacht, you will have to hire a team to tow you. The team-master's place is close to the other office. The price for a team of mules—three—is seven dollars. They will not hire less than three, that being the regulation team.

The best way is to leave New Brunswick early in the morning, the mules being ready about half-past five or six. Starting in this way, you can get to Trenton by nightfall. Motor boats can start any time, as they are independent and can tie up wherever and whenever they please. Before starting give the mule-boy a dollar, as it will probably prevent a lot of exta work and damage. It

Lock on Raritan and Delaware Canal

is also a good thing to have a bottle of whiskey of a hot brand and a box of tough cigars. A few drinks or smokes handed out at the locks and other points will grease the passage wonderfully.

The tie-up place in Trenton is alongside the railroad yards—rather noisy berth—but you will be perfectly safe if you keep close up against the stringers; but look out for the night packets—steamers running regularly between Philadelphia, Trenton and New York. They come along about midnight, and are apt to throw a swell, so have your fenders out on both sides.

Leaving Trenton at the break of day, you drop down through a series of locks and reach Bordentown, where the canal debouches into the Delaware River in about three hours. The distance is nine miles. When you go into the basin at Bordentown you must take your pass over to the office and exchange it for another that will permit you to leave the canal. I forgot to tell you that at each lock the tender will ask to see your pass.

From Bordentown to Delaware City, where you enter

the next canal, is about sixty miles. The Delaware River is a very easy stream to navigate if the water is high, but you need a chart, and must keep your lead going. For some time after leaving the canal the river is comparatively narrow, but it soon broadens out into a splendid stream. There is one bridge—that at Bridesburg. This structure has a clear headroom of 55 feet at high water, so that almost any yacht that will go through the canal can pass under it. The current when the river is in freshet is very strong at this point, and care must be taken when approaching the structure. After passing Philadelphia you will find a very strong tidal current, but as the ebb runs a much longer time than the flood, it is very easy, if you catch the high water, to work down stream.

Delaware City—a city by title and a very small place by right—is a short distance below Newcastle. You will notice an ice breaker built of stone that marks the entrance. The town is on flat land, with a bunch of willow trees hanging over it. Go right into the basin. There

is a lock to compensate for the tidal difference, but this canal is on one level halfway, and then after locking is another level to the outlet at the Chesapeake end.

The office of the canal is close at hand; go in and get your pass. The charges on this canal are higher than on the Delaware and Raritan, being about $4 for a boat forty feet long. Your team of mules will cost you $3.50, which is considerably higher than the charge on the other canal, as the distance is only thirteen miles.

This canal is wider and deeper than the Delaware and Raritan, and you can make much better time through it. Sometimes you can get a tug that is going your way to tow you through. Large-masted vessels go through, so as to cut closer the voyage between New York and Baltimore. It is a fine canal for motor boats, as they can run at greater speed than is usually permitted in other waterways of this kind. About four miles from the eastern end the ditch broadens into quite an extensive pond.

It takes about four hours to do these thirteen miles if you fee the mule-boy.

Western Entrance to Delaware and Chesapeake Canal

This canal was built during the great boom for these waterways that preceded the coming of the railroad. It was built about 1825, just when New York finished her great Erie route. The promoters of this channel evidently expected it to become one of the main highways of national commerce, and to crown the enterprise established what it was expected would be a great metropolis at each end. These embryo Romes they laid out in a broad and stately fashion, and then with high-pitched prophecy christened them Delaware and Chesapeake City. But alas! the subtle brain and the skillful hand of Stephenson were at work, and scarcely half a score of years after this waterway was opened to commerce the Rocket turned her wheels and methods of transportation were revolutionized.

The stage coach and the canal packet passed away, and with them went the glory and prospects of many a town. Two more miserable specimens of civic failure than these places it would be hard to find even in this land of sudden changes.

St. Michel's Harbor

At Chesapeake City you will go into a deep lock, the drop here being one of eighteen feet. This takes you down into a small river or creek that leads into the great bay. Before passing out you must visit the office and get your discharge; while in there, if you have a sail craft, get your ticket for a tow down to the bay. The tug will take you down for $1, and it is well-given, for it is a mean place to try to sail through.

If you get to Chesapeake City in the evening you can tie up at the mooring pier until morning, when the tug goes down the river. When the tug casts you off you have nothing but clear sailing ahead throughout that splendid sheet of water called Chesapeake Bay. The charts for this part of the voyage can be had in two sets of three sheets each, or you can get a full chart of the bay in one sheet.

I would advise a sailing yacht skipper, if he is in a hurry to get south, to wait for a fair wind, and then hold on night and day. Indeed, all through this passage it is better to wait for fair winds than attempt to beat

down. The distance from the Turkey Point Light at the mouth of Elk River to Norfolk is about 160 sea miles. A sailing yacht, with a strong, fair wind, will do this in forty-eight hours. After passing Cove Point Light you can favor the west side of the bay, but it is best to keep as much as possible near the center of the bay. The chief danger is from nets, the place being fairly beset with both the drift and pound variety. The best wind for running the bay is a nor'wester when going south and sou'wester when working north. In the spring northerly winds prevail; in summer there is much sou'west.

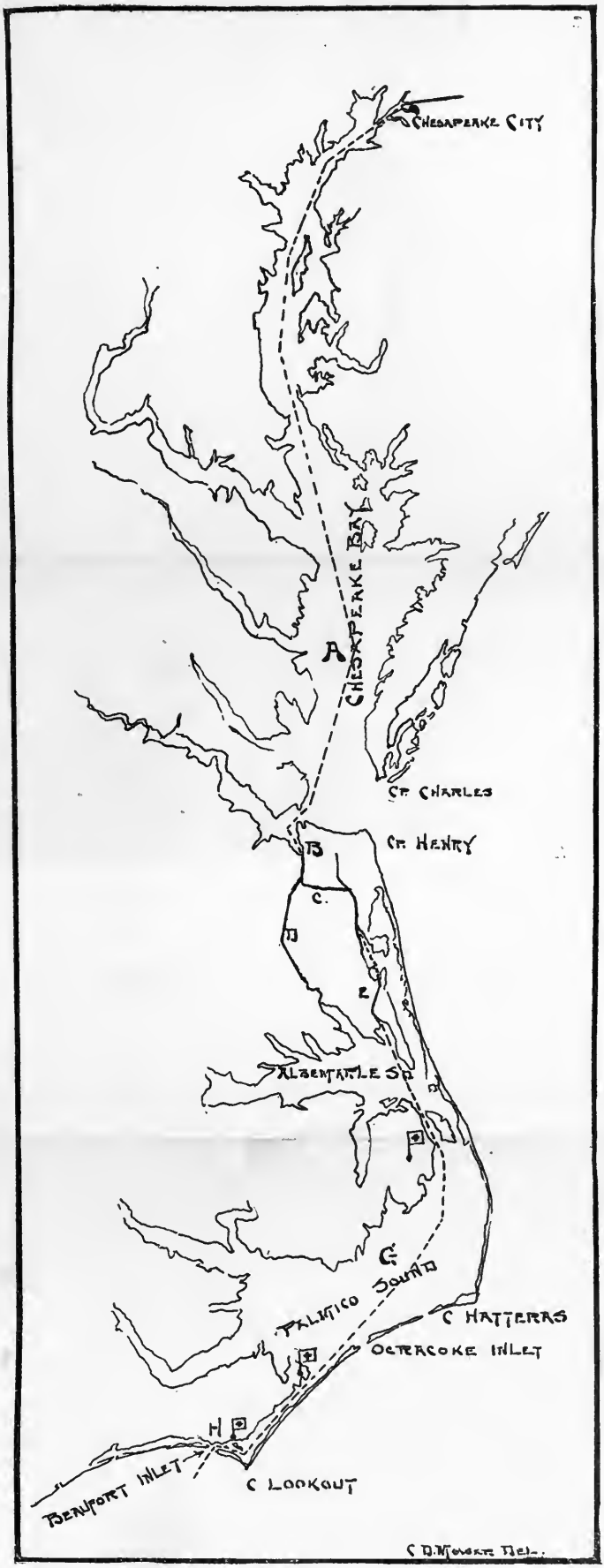
If sailing at night close in along either shore take a cast at least once every fifteen minutes, and you will keep out of trouble. Let me impress upon you and upon all yachtsmen the value of the lead; with it and a chart you can go safely anywhere about this coast, and therefore always keep it handy in the cockpit and see that the watch use it.

When you have passed Fortress Monroe stand boldly across the roads and into the Norfolk harbor (Elizabeth

River). This stream has a well-buoyed channel, and you will have no difficulty in getting up to the town. After you pass a bunch of railroad piers, and right across from the big white Naval Hospital that stands among pine trees, a small bight makes into the land on the east shore. You will see here a kind of summer house standing in the water, and close to, inshore, a boat club. This is the yacht anchorage, and the best place to come to with a small craft.

The club will, if you ask, very kindly place their float at your disposal, and the entrance is handy to the trolley that runs through the city. Norfolk is a lively and growing place. It is the most un-Southern of all Southern towns. Everything is new and good. The people are up to date in business methods and manners. This place will be the biggest city south of Baltimore in the near future. It has a fine harbor and is the terminal port of two or three railroads.

Having reached this place, if you are a power-boat, you can go on when you please, and your course lies up


CHESAPEAKE CITY
CHESAPEAKE BAY
A
CR CHARLES
CR HENRY
B
C
D
E
ALBEMARLE SD
G
PALMICO SOUND
C HATTERAS
OCRACOKE INLET
H
BEAUFORT INLET
C LOOKOUT

the south branch of the Elizabeth River, the branch that goes up past the Navy Yard, which is on the Portsmouth side. It is ten miles up the river to the entrance of the Chesapeake and Albemarle Canal, but the other canal, the Dismal Swamp, which is again open to traffic, is someway this side of it.

A sailing craft tows through this canal by tug. The office where you must go to get your tug is close to the landing of the Portsmouth ferry in Norfolk. The towboat man's name is Smith, and you will see his sign from the river. Leave word with him, and he will tell you at what time the tug will start. The tows are generally made up every morning, the anchorage ground where the boats wait being just to the south of the ferry crossing. The best place for a yacht is on the end of the line, as there you have nothing dragging on you.

As soon as the tow is made up the tug starts up the south branch of the Elizabeth River. Before we get under way let me caution you to renew your stores at Norfolk, as it is the last place at which you can get any-

CROATAN LIGHT, ALBEMARLE SOUND

thing except bare necessities until Beaufort, N. C., is reached.

The river is a fairly wide stream until you get well up to the end, but it will need careful steering to keep off the banks when passing caravans coming the other way. Also look out to stand by if the tug has to stop. For checking your speed keep a bucket on a rope handy, and have plenty of spare line on board to slack away. For if you run aground the tug will not know it, and unless you slack away handsomely something will have to go.

When you get to the entrance of the canal you must go to the office and pay your canalage and towage. On this route both of these charges are ridiculously small. The charge paid for towing the Dragoon, a sloop forty-five feet over all, of about five tons displacement, was $1.50 and the canalage $2. The distance is sixty-five miles. A New York tow-boat pirate would drop in a fit if he heard of this. It is most certainly the cheapest thing of the kind in America.

The reason the towage is so light is this: in order to make a success of the waterway it is necessary to have a constant means of taking vessels through. The bulk of the craft using the passage are oystermen and lumber hookers, who cannot afford to pay heavily, and if deeply taxed would take the outside passage even though the distance is longer. A tug will take six or eight vessels through at a time, and so you travel like a train of cars hauled by an engine.

This canal joins the Elizabeth River to the North Landing River passing through a portion of the Dismal Swamp. It is wide and deep and has but one lock, and that only for use as a current check.

After passing through the canal you enter the North Landing River, a stream that is much of a backwater, it emptying into Carrituck Sound, and having in consequence but little current. Down this you go until the tug hauls the tow into the afore-mentioned sound.

PERTH AMBOY TO NORFOLK, ALL INSIDE.

Waters.	Statute Miles.
Raritan River	15
Delaware and Raritan Canal	44
Delaware River	60
Chesapeake and Delaware Canal	13
Chesapeake Bay	200
	332
Sandy Hook to Norfolk, all outside	290
Difference	42

NORFOLK TO ALBEMARLE SOUND.

Elizabeth River	10
Chesapeake and Albemarle Canal	10
North Landing River	20
Carrituck Sound	10
North River and Canal	15
	65

CHARTS.

No. 375. Raritan River.

" 126. Delaware River, Port Penn to Trenton.

" 131. Entrance to Chesapeake Bay.
" 132. York River to Pocomoke.
" 133. Pocomoke Sound to Potomac River.
" 134. Potomac River to Choptank River.
" 135. Choptank River to Magothy River.
" 136. Magothy River to Head of Bay.

These charts cost 50 cents apiece.

PART II

WHEN I left you last month we were about to enter Carrituck Sound from the North Landing River, having passed through the canal and down that stream. This sound is one of those shallow lagoons locked in by raised sandbars common to all low coasts, where the soil is of a shiftable nature. On the east coast of the United States they are to be found to the southward of the terminal moraine, which begins at Cape Cod, notable examples being Great South Bay on Long Island and Barnegat Bay in New Jersey. The cause and manner of their forming is simply this: The ocean constantly encroaches upon the land as the latter subsides, its most extensive advancements being made where streams enter it, if they do not pour out a sufficient amount of water to

counteract its powers. The fresh water not being sufficiently strong to keep open a channel, the sea builds up a bar of sand across its mouth. This at times of drought becomes a full bar, stopping all egress of the fresh water. Behind this bar the water accumulates until it forms a lake or pond. Many such exist along the Jersey coast—Wreck Lake, near Sea Girt, being an example.

When the freshet occurs the locked pond rises, and by weight of its water breaks through and forms an outlet or inlet, as they are frequently but often not properly called. Those entering Great South Bay are really inlets, because the bay does not receive sufficient fresh water to oppose the salt, and consequently there is a constant inrush of the tidal wave every twelve hours. But the North Carolina sounds receive a large body of fresh water, and are but little influenced by the tide, so that their inlets are outlets. The strip of beach inlocking Currituck, Albemarle and Pamlico Sounds, is the result of the meeting of conflicting forces. If you look at the map and trace the beach south from Cape Henry and north from Bogue

Inlet you will notice that it forms roughly a triangle, the apex of which is Cape Hatteras and its attendant shoals. This formation is the result of its being the meeting point of two currents having their origin in the prevailing winds. To the north of Hatteras the heavy winds are from the north, to the south of that cape they are from the south. These winds produce a current which sweeps along the coast, taking in its course the sand, and gradually working it in either one direction or the other. The north current takes its course towards Hatteras. Here it meets the south current, and is turned out to sea or else driven to a standstill; in either case it deposits its load before departing. In the same way the south current acts. For ages this has gone on, until there has accumulated those enormous tracts of overwater beach and contiguous surfaces of underwater shoals.

The sand deposited in this way is taken up by the sea and hurled in towards the land, the fresh water attacks and drives it back, and so the fight goes on, resulting in beaches growing, disappearing, and shifting, in outlets

being opened and closed, of channels being dug and filled. The constant, wonderful hand of Nature here is displayed in that indefatigable toil, which makes perfect all her labors. She is the arch destroyer; she is the queen of all builders. How beautiful is her ordination of effort, how perfect is her balance of effect. It is only when you live with her, when you watch her with open and desiring eyes, following the countless and changeful movements of her tireless and subtle hands, that you realize how exquisitely skillful a magician she is. There is nothing so beautiful in nature as Nature herself. The essence of all order and force, the keeper of this great house in which we dwell, the subtle mover of wind and wave, the maker and unmaker of the land, the giver of all gifts, the visible presence of that Great Power to whom the universe owes its creation and life.

Carrituck Sound is very shoal; there is scarcely a spot in it with over 10 feet of water. The vaster part of the expanse has less than 4 feet covering it. From the mouth of the river to the opening of the second canal there is a

DRAWBRIDGE ON ELIZABETH RIVER, VA.

dredged channel with 8 feet in it. This channel is marked with spiles driven in at frequent intervals, and on these at night lights are kept burning. Through this channel the sail yachts tow. The second canal is a short affair, cut through a spit of sand and connecting the sound with the North River. At the mouth of this stream the tug casts you off, and you make sail to cross Albemarle Sound. This sound has its greatest length east and west. Having crossed this you steer to enter Croatan Sound between the mainland and Roanoke Island.

This channel is wide enough and deep enough to be taken easily with a leading wind, but if beating down the lead should be constantly used. To safely pass through any of these waters compass courses must be steered, and the lead kept going in order to verify your position. By doing this and keeping your course traced on the chart you can stay off the mud. Looking on the chart you will find a light on the west side of this sound called Roanoke Marsh. This you must pass close to and use it for your point of departure to proceed into Pamlico. A

short distance to the south of this light a bight makes into the main land; here there is a RUDDER Station in the charge of Captain Smith. This bay affords good anchorage in any winds for boats drawing 6 feet and under. The point making out to the light is really an island, there being a creek opening in to the RUDDER anchorage, and also to the north, but this latter entrance should not be tried for by a stranger. To reach the anchorage run south until the fishing huts are open to the north of west, and then stand in, keeping your lead going, and not getting into less than six feet.

Across the sound opposite the light on the Island of Roanoke is a small place called Skyco. Here is a post office with a twice-weekly mail, and two little shops, where a few provisions can be had at a pinch. Fish in plenty can be obtained from the fishermen. Roanoke Island is interesting, being the first spot upon which the English settled within the present boundaries of the United States. This colony was one of Raleigh's ventures, and has excited the interest of three centuries be-

cause of the total disappearance of the settlers, who are supposed to have wandered inland, and to have become absorbed in one of the Indian tribes.

You will find this North Carolina fishing folk to be a simple and kindly people. You can trust them with all you have. Civilization has not destroyed their natural goodness, and not having come into repeated contact with visitors, they have no notions of roasting the stranger. Their boats are a peculiarly rigged craft, excellent sailers, very seaworthy. Captain Smith, who has charge of THE RUDDER station at the marshes, will look out for you if you hoist a flag, and furnish safe pilotage to the anchorage.

PART III

WHEN I left you last time you were snug in the anchorage of THE RUDDER Station at Roanoke Marshes. Like a sensible man you are going to start early and with a fair wind for your next point—Harbor Island Bar Light, at the mouth of Core Sound. Pamlico Sound, though broad and a comparatively deep body, is not a genial spot for a stranger to navigate after dark. The outside or ocean shore of it shallows for a long distance, and should be always avoided; the same may be said of the mainland reaches. So long as you can carry a fair wind it is a simple task to hold on down the middle, but let the wind veer or blow hard, you will have to get into shelter and anchor. The sound is not big enough or clear enough to heave-to in with safety.

In daylight you would have little difficulty in picking out and gaining a safe anchorage, but at night, having to depend on the lead and compass, it would be exceedingly difficult with a boat of over three feet draught. By leaving Roanoke Marshes at early morning a good boat with a fair sailing breeze should reach Core Sound before darkness sets in. Once there you can find safe anchorage in anything but a gale.

Taking your departure from Roanoke Light, you steer S. by E. until Stumpy Point bears west, distant about two miles. Having gained this point, you steer south to pass the light on Long Shoal. This sand spit runs out from the land some seven miles, and has a light on it two miles from the outer end. The shoalest water anywhere south or east of the house is eight feet, so you can cross it with safety. When the light bears N. W. alter your course to S. W.

There are two inlets to Pamlico Sound that are, or were, open to navigation—Hatteras and Ocracoke. The former, so the fisherman told me, is fast closing up—

but the latter is all right—but I do not advise a man to try getting in or out of it without a pilot unless he is obliged to. The bars on these inlets are constantly shifting, and a mistake in such a place, if there is any sea on, is too apt to be fatal. There is a small settlement on the south side of Ocracoke, where you can get a pilot to take you out. The depth on the bar is said to be twelve feet.

The course that I gave you at Long Shoal will take you across Bluff Shoal right where the buoy is moored. This shoal extends from Ocracoke Inlet clear across the Sound, and has where you cross it a depth of ten feet. Having picked up this buoy, you steer W. S. W. until past Royal Shoal Light, and then S. by W. ¾ W. All these courses should be steered with a slight westerly helm to make the marks exactly, but as given they will bring you within eye-shot of the objects. Your position can be constantly verified by using the lead.

Harbor Island Light is on the bar at the mouth of Core Sound. This bar has 4½ feet of water on it, but

when we crossed it in the spring of 1899 the least water we found was six feet; but at that time the wind had been blowing strongly from the north for some days, and piled up the water at the south end of the sound; the channel is close to the light, on the west side.

Core Sound is an awful place to tackle. It consists of a big shallow, through which is strung out a series of holes, and the job is not only to keep in these holes, but to get from one to the other across places where the water is deepest.

If you draw over three feet I advise you to take a pilot through to Beaufort. Of course a man with plenty of time and a lead could get through, but the game is not worth the candle. THE RUDDER has a station at Atlantic, N. C., on this sound, and if you write the station captain there—Sam Rose—to look out for you, he will be on hand and take you through for a reasonable fee. He is an extremely clever pilot, and can be relied upon. You had better write him when leaving Norfolk,

giving the probable day of your arrival at Harbor Island Bar.

The sound has been staked off by the Government, but the stakes are not always up. What is needed is a dredged channel. There is a gun club on the island and a place to anchor.

From Core you pass into Black Sound, and then on to Beaufort. This place is a small business town, where you can get supplies. Our station captain there is an able pilot by name of Smith, who will take a boat all along the coast from Norfolk to Charleston. He knows the coast thoroughly, and if going South with a launch I advise you to hire him. A letter addressed to Beaufort, N. C., will command his services.

Opposite Beaufort is Morehead City, which has railroad connection with civilization. The anchorage off this town is good and easy of access. The inlet at Beaufort is one of the best along the coast; there is no danger going in or out of it in ordinary weather. To the east of Beaufort is Cape Lookout. Behind this cape there

is a small bay, giving excellent anchorage for easterly winds.

If you do not go out to sea through Beaufort Inlet you will have to pass through Bogue Sound. This is another shallow sheet, and you will have to get a pilot for it or have the patience of Job and the perseverance of Sisyphus.

One trouble in navigating these sounds is that there is but a slight rise and fall of the tide; consequently if you take bottom you are aground, and it is a case of haul off. Every yacht going through them should have a good kedge and a long drift of strong light line to lay out to haul off with. At Beaufort there is considerable rise and fall, but in Core Sound very little. I said before, the highest water is when northerly winds prevail, the lowest when southerly.

If you pass out to sea at Beaufort your next place of stop is at the Wilmington River, just inside of Cape Fear. There is a channel here that runs in behind the cape, but I do not know anything about it except by

hearsay, so will leave it to others to describe.

If a sailing yacht, I advise you to keep right on for Frying Pan Light, anchored at the extremity of the shoal. This you can pass well inside of if the sea is not too heavy. Having sighted Frying Pan and Cape Fear Light, take your departure for Charleston. Leaving Beaufort with a fair wind, either N. E. or N. W., you can make the run in thirty-six to forty hours. The Dragoon, in the spring of 1899, did it in thirty hours, and was run considerably out of the proper course in order to pick up the land. She being a remarkably fast boat, with a free sheet and logging as high as nine knots, it is probable that an ordinary yacht would be under similar conditions at least six to ten hours longer.

In putting to sea from Beaufort to make this run I advise waiting for a fair wind and making an early start. The danger is being caught in a heavy southeaster or southwester. In that case you will have either to run back or heave-to. The best time is after a storm, as then it is likely to be good weather for some five or six

days. If, as is generally the case, a nor'wester follows the bad weather it will last two or three days. But, above all things, if in a good sailing vessel, do not hug the coast. There is no advantage in getting in on this coast and every advantage in steering a direct course. Your safety lies in getting from port to port as quickly as possible.

Don't go out to sea unless fully prepared to be blown off shore. Have plenty of water and stores on board. Before leaving lash your oars in the small boat, and put in it a compass, a breaker of water and some food. Then if you have to abandon your vessel in a hurry there will be something to sustain you. Keep life lines stretched fore and aft and your forward hatch fast. Don't carry too much sail after dark, or in fact at any time. It is better to keep under snug canvas so long as the boat will carry her speed. Use a log to keep check on your distances.

Distances.

North River Light to Croaton Sound Light	14	miles
Croaton to Roanoke Marsh	9	"
Roanoke Marsh to Stumpy Pt., bearing W	7	"
Stumpy Pt. to Long Shoal	10	"
Long Shoal to Bluff S. Buoy	28	"
Bluff S. Buoy to Royal S. Light	5	"
Royal S. Light to Harbor Island Bar	9	"
Core Sound	27	"
Back Sound to Beaufort	9	"
Albemarle Sound	14	miles
Croaton "	9	"
Pamlico "	59	"
Core "	27	"
Back	9	"
		118 miles

Charts.

No. 140 Albemarle Sound.

" 142 Pamlico Sound.

" 143 " "

" 421 Core and Back Sounds.

" 147 Beaufort Inlet and Bogue Sound.

FROM CHARLESTON, S. C., TO ST. JOHN'S, FLORIDA

FROM CHARLESTON, S. C., TO ST. JOHN'S, FLORIDA

THE streams connecting the inlets and sounds are all subject to tidal ebb and flow and receive their waters generally at both ends; at the meeting of the tides there is usually a shoal called the "divide." In most of the streams the ebb tide forms a shoal in the eddy below the points, and the sharper the bend the larger the shoal. These are called "ebb-tide shoals." As a rule the bottom is soft, the exception being in a few streams near the coast, in which there are oyster beds, and in the phosphate rock bottoms in South Carolina and part of Georgia.

Wappoo Creek should be entered from Ashley River at half flood, so as to reach Church Flats, the first

"divide," about fourteen miles distant, before high water. Passing through Wappoo Creek, the passage leads into and up Stono River, a distance of eleven miles to Church Flats, where the depth in a narrow channel is about three feet. Care should be taken not to enter Rantrouls Creek. About two miles above Church Flats the broad part of Wadmelaw River (termed Wadmelaw Sound) is entered, and through a very crooked and difficult channel for part of the way the passage leads for a distance of eight and three-quarter miles to North Edisto River, and down the latter about one and three-quarter miles to the mouth of the Dawho River, which enters from Westward. Dawho River is about fourteen and one-half miles long between North and South Edisto Rivers; measured in a straight line the distance is a little less than six miles; the channel is crooked and in some places quite narrow, but two miles above the North Edisto River a mid-river course can generally be followed. The passage leads from the western entrance of Dawho River down the South Edisto River for a distance of four and one-half

miles, the channel leading through extensive shoals to the mouth of Mosquito Creek. The depth over the divide is about one and one-half feet, and the mean rise and fall of tides about six feet. Mosquito Creek is one of the most narrow, crooked and difficult parts of the passage; it is about seven and three-quarter miles long and should be entered about one hour before high water. The passage leads from the western entrance to Mosquito Creek down the Ashepoo River eight and one-half miles to the main channel of St. Helena Sound. From St. Helena Sound pass up the Coosaw River from Westward. Entering Brickyard Creek, the passage leads through the creek into Beaufort River, and down the latter to Port Royal, the distance from Coosaw River to Port Royal being twelve and one-half miles. The channel from Coosaw River into Brickyard Creek has been improved by the United States Government and now has a depth of seven feet. Bound northward from Port Royal, the time of starting should be arranged so as to arrive at the Ashepoo River entrance to Mosquito Creek one hour be-

fore high water, so as to carry the best water over the divide. The distance from Port Royal to Mosquito Creek is about thirty-six miles.

From Port Royal the passage leads down Beaufort River to Port Royal Sound and across the sound, the distance to the entrance of Skull Creek being eleven miles. Skull Creek is full of shoals and islands, but there is a very crooked and narrow channel with a least depth of about twelve feet through the creek. Passing through Skull Creek, a distance of four and three-quarter miles, the passage leads down Mackay's Creek and Calibogue Sound to the mouth of Cooper River, a distance of five miles. There the passage by way of Tybee Roads leads southward, and the other leads westward into Cooper River. Following the former route, the passage leads through the entrance of Calibogue Sound across the shoals, separating it from Tybee Roads and from Tybee Roads up the main channel of the Savannah River about fifteen miles to the City of Savannah. From Calibogue Sound the route through Cooper River leads up the river

about three and three-quarter miles to Ramshorn Creek, which should be entered about one hour before high water on account of the "divide," which has a depth of about five feet over it. Passing out of Ramshorn Creek, southward of the small island at its western entrance, the passage leads about two and one-quarter miles southwestward through New River to Walls Cut, through the cut and down Wrights River about two miles, then across the shoals at the entrance and into the main channel of Savannah River, following the channel for a distance of eleven miles to the city of Savannah. The mean rise and fall of tides in the passage between Port Royal and Savannah is about six and one-half feet. From Savannah to Darien the distance is seventy-eight miles, and to Brunswick 103 miles. The shoalest part of the passage is through the Romerly Marshes, where the depth is three feet. There is a passage from Wassaw Sound to Odingsell River, by which the passage through the marshes is avoided; this passage leads through a small creek known as old Romerly Marsh Channel and through

the New Cut, which has a depth of five feet, into Wassaw Creek and down the latter to Odingsell River and up the river to Adams Creek, where it joins the passage through the marshes. A depth of about five feet can be taken through this passage, which is now generally used. A boat leaving Savannah should regulate her time of departure so as to enter Old Romerly Marsh Creek about one hour before high water; the distance is about twenty-miles. From the City of Savannah the passage leads down the ship channel of the river about three and one-half miles and then through the gap in the jetty southward of Elba Island a little over one mile into St. Augustine Creek. Or a boat can stand down Savannah River and enter Lazaretto Creek from Tybee Roads. When about one mile above the entrance to St. Augustine Creek the passage then continues for a distance of fourteen and one-half miles down the Wilmington River to Romerly Marsh Creek, which enters it from Westward at its mouth in Wassaw Sound. If necessary to wait for the tide, good anchorage is found in Wilmington River

about half a mile above the mouth of Romerly Marsh Creek, or, if coming from southward, in Vernon River, off the mouth of Adams Creek. The passage through Romerly Marshes is seldom used; at high water of spring tides nearly all the landmarks are covered, making it difficult to keep in the channel. The mean rise and fall of tides in the Romerly Marshes is about six feet. Westerly winds cause a lower range of tides. Enter old Romerly Marsh Channel, which makes southward just inside the mouth of Romerly Marsh Creek, and pass through New Cut into Wassaw Creek and down the latter to Odingsell River. Stand up the river and into Adams Creek and down the creek to its mouth, then diagonally across the mouth of Vernon River and through a narrow passage known as Hell Gate, which leads westward of a large marshy island (Raccoon Key) and into Ogeechee River. The passage is up Ogeechee River about three and one-half miles, and northward of the middle marsh, to the entrance of Florida Passage, which enters the river from southward; then through Florida Passage and

Bear River, a distance of ten and one-half miles, to St. Catherine's Sound. From the mouth of Bear River the passage leads across St. Catherine's Sound between Medway Spit and the Middle Ground, and enters North Newport River at the eastern side of its entrance; then four and one-half miles up the river to Johnson's Creek and five and one-half miles through the latter into South Newport River and down the latter river into Sapelo Sound. Crossing Sapelo Sound, the passage leads through Mud River. This is a broad, shallow stream, full of shoals and flats, with a channel depth of only five feet. There it may be necessary to wait for the tide, which has a mean rise and fall of about seven feet. Boats bound south can anchor in Sapelo Sound at the mouth of Mud River, or, if bound north, they can anchor in Doboy Sound, off the mouth of New Teakettle Creek, to wait for the tide. About four and a half miles above the entrance of Mud River the passage leads southward for a distance of four and three-quarter miles through New Teakettle Creek into Doboy Sound. The passage leads across Do-

boy Sound through the branch of North River known as Doboy River, thence through the Rockdedundy River into and through Little Mud River to Altamaha Sound. The channel between Doboy and Altamaha Sounds leads between shoals, and in the mouth of Little Mud River the seven-foot channel is very narrow and difficult to keep at low water. Crossing Altamaha Sound between the shoals, the passage leads through Buttermilk Sound into and through Frederica River to St. Simon Sound. The distance from the mouth of Little Mud River in Altamaha Sound to St. Simon Sound is nineteen miles; the mean rise and fall of tides is about six and a half feet.

Crossing St. Simon Sound, the passage leads into Brunswick River, on the eastern side of its entrance, and up the River two and a half miles to the entrance of Jekyl Creek. The entrance to the creek has been improved by a jetty, but the depth in 1902 was about five feet and the mean rise and fall of the tides is about six and a half feet. Boats waiting for the tide to enter the creek can anchor in the channel of Brunswick River, if coming from north-

ward; or, in Jekyl Sound if coming from southward. The passage leads through Jekyl Creek into Jekyl Sound and thence across the entrance to St. Andrew Sound into Cumberland River and through it to Cumberland Sound. The least depth in the channel usually followed from St Andrew Sound to Fernandina is about five feet and the distance is twenty-three miles; a least depth of seven feet will be found by going up the north mouth of the Crooked River and down the south mouth to avoid Horseshoe Shoal. The passage leads through Cumberland River into Cumberland Sound and down the latter into Amelia River to Fernandina. The channel in many places is quite narrow and leads between shoals which are subject to changes. At the mouth of Crooked River, about midway between St. Andrew Sound and the entrance to Cumberland Sound, is a sharp curve in the channel around what is known as the Horseshoe Shoal, or the "divide." This is also the shoalest part of the channel, and the point where the tides from St. Andrew and Cumberland Sounds meet. The mean rise and fall of the tides is about six feet.

ST. JOHN'S RIVER AND BEYOND

FROM Charleston to St. John's River, yachts of light draught can proceed inside among the Sea Islands, but if the sea is smooth and wind favorable there is no great risk in going outside, the coast being well lighted and harbors numerous and easy of access. There is no trouble in getting into the St. John's River and proceeding up some twenty-five miles to Jacksonville if desired, the river being plainly marked out by posts numbered and colored properly. The St. John's Bar jetties extend out to deep water, and once inside them you are all right.

Going south, the next inlet is at St. Augustine, about thirty miles from St. John's Bar. There is water enough here for craft of considerable draught, but unless the

conditions were very favorable it would be prudent to lay to and await a pilot. St. Augustine is a very popular resort in winter, and small boats, drawing not over two feet of water, could proceed from there down the Matanzas River to Matanzas Inlet and go to sea from there. From Matanzas to the next inlet, Mosquito Inlet, is some forty miles along a straight stretch of beach exposed to all winds except west and southwest.

There is a tall lighthouse on the north side of Mosquito Inlet, visible some fifteen miles in clear weather from the deck of a small yacht, so you will not be likely to run by it. There is plenty of water on the bar at Mosquito Inlet for craft drawing five feet or less, but the channel changes after heavy easterly blows, and except in very smooth weather, the surf breaks all over the bar. The safest way if in a boat, say, under thirty feet, would be to write to either Henry Van Dorn or Arthur Pellett, Daytona, Fla., to come to Jacksonville or Mayport, at the mouth of St. John's River, wherever your yacht was lying, and pilot her down the one hun-

HALIFAX RIVER

dred miles of exposed coast and safely across the Mosquito Inlet Bar. These men are reliable, and are frequently employed to bring yachts down from Jacksonville. If your craft was large enough to keep the sea in bad weather and drew, say, not over four feet, then you could lay off the bar at Mosquito Inlet until the sea was smooth enough to venture in, or, by setting the proper signal, a pilot would probably come out to bring you in. In former times when schooners went there for live oak timber, there was a regular pilot station there, but now few vessels come there. There have been a number of lives lost on this bar, and it is not a place to be trifled with. Once inside Mosquito Inlet you can go in smooth water all the way to Key West, some four hundred miles.

Fourteen miles up the Halifax River, north from Mosquito Inlet, is Daytona, the prettiest town in all Florida, and a very lively place from December to April. Supplies of all kinds can be bought here at moderate prices, and there is a very fine yacht clubhouse here, which is

open 365 days in the year, and where visiting yachtsmen will always find a welcome. A view of the house, with a descriptive article, appeared in THE RUDDER for February, 1900. The channel from the inlet to Daytona is well staked out, and strangers cannot go astray. A visit to Daytona should not be missed on any account; there is a good set of ways there for hauling out, belonging to the yacht club, and a number of large yachts have been built there, notably the launch Sweetheart, eighty-four feet long, belonging to Commodore Burgoyne, driven by two Globe motors. Starting south once more, it would be best to leave Daytona in the afternoon and anchor over night at the lighthouse at Mosquito Inlet, where there are two good hotels and a post-office named Ponce Park. Passing the inlet next morning, you proceed up the Hillsboro River about three miles to New Smyrna, one of the oldest settlements in this country. There are several good hotels here, and the fishing is fine, especially for sheepshead, at the drawbridge. There is also good hunting in the hammocks back of New Smyrna. Mr. Lorillard's

house-boat Caiman and her consort the Tomoka can usually be seen here in December fitting out for a cruise down the lower river. It is, perhaps, unnecessary to say that the Florida East Coast Railway, from Jacksonville to Miami, follows the shore of the inside route all the way from Ormonde, six miles north of Daytona, to Miami; and you will never be out of hearing of the locomotive, and have no delay in getting your mail or the daily papers, as there are several trains daily after the season opens. If your craft draws over three and one-half feet do not go inside south of New Smyrna, but with a draught of, say, not over thirty inches, you can go nearly anywhere.

For some fifteen miles south of Smyrna the river is narrow and rather winding, although with a north or northwest wind you can do it without tacking. There is nothing whatever to indicate the channel, and you will have to trust in luck unless you follow some local boat. Among these islands below Smyrna you will see great numbers of ducks, cranes, pelicans and other aquatic

Indian River

fowl. Formerly, before the freezes of 1895, these islands were covered with a dense growth of mangroves, but now only the dead trunks are left. Below Eldora you will pass through the Oak Hill Canal, three-quarters of a mile long, into Mosquito Lagoon, a very wide, imposing sheet of water, but very shallow. The channel down to the Haulover Canal, ten miles south, is well staked out, however, and you will, if you have a fair wind, negotiate this stretch in less than two hours. The Haulover Canal extends out into the lagoon one-quarter of a mile, and there is a stake marking the entrance. This canal is cut through solid Coquina rock nearly three-quarters of a mile, and takes you directly into the famous Indian River, which at this point is very wide, and in a fresh northwester a very rugged piece of water. It is fairly deep, and by keeping out about a mile from shore you will get to Titusville all right in about two hours from the canal. Here you will probably remain over night, as it is a good place to get everything except drinking water. South of Titusville the Indian River is six to eight miles

wide, gradually becoming narrower, until at Rockledge, twenty miles below, it is not over one and one-half miles wide. With a fair wind, north or northwest, it is a delightful sail down to Rockledge, plenty of water and orange groves in sight all along. At Rockledge the groves extend for miles along the rocky shore, the water here being deep right up to the bank. Rockledge is a great winter resort, and there are fine hotels there. For twenty miles further on the river is about one and one-half miles wide, the eastern shore being Merritt's Island, which is very thickly settled by people engaged in raising string-beans; there are some pineapple plantations here also, about the northern limit of that fruit. The southern extremity of Merritt's Island is not over one hundred feet wide for a distance of a mile, a very peculiar formation of coral rock with very deep water close up. Rounding the southern point of this island, you can, if you like, go on up Banana River, which is wide and fairly deep. There is not much up there to see except ducks, of which there are thousands, mostly of one variety, blue bills—or

as they call them in Florida, raft ducks. Banana River can be also entered at a point opposite Titusville through Banana Creek; but only about one foot can be carried through this creek, as the writer found out in January, 1900, to his sorrow. At the far end of this creek there is an elegant clubhouse, belonging to some Boston duck hunters—the Canaveral Club.

Below Merritt's Island the river is wider again, but clear sailing, the points making out from shore being marked by large posts, erected by the East Coast Canal Company some eight or ten years ago. Pineapple fields are numerous along the eastern or peninsula side of the river. This peninsula is but one-half mile or so wide, between Indian River and the ocean, and you can always hear the surf. Sailing on south, passing Eau Gallie and Melbourne—fine towns—on the west shore, you come to an island in the river, called Grant's Farm; go either side of this, following the smaller stakes, marking the submerged canal banks; then for a stretch of fifteen miles you have the wide river, until below Sebastian. Further

INDIAN RIVER

progress seems barred by islands covered with tall mangrove trees. This is Indian River Narrows; there are two channels—the steamboat route, and the narrow channel following the west bank of the river. If you do not draw over two feet keep along the west bank, and after some eight miles sailing among the mangroves you come out into the lower river, a wide sheet of water extending some forty-five or fifty miles to Santa Lucia Inlet. There are some oyster reefs in the upper part of this long reach, but they are all staked out, and with a fair wind you can reach St. Lucie by night, the winter home of Florida's *third* senator, Matt. S. Quay, of Pennsylvania. Directly opposite here is Indian River Inlet, the first break in the coast line south of Mosquito Inlet, or over one hundred miles to the north.

Five miles south of St. Lucie is Fort Pierce, quite a thriving place, having a large trade with the interior. Indians frequently come here to trade, bringing their skins, etc., in on ox teams. Below Fort Pierce the river is an ideal place for sailing, wide and deep from shore

to shore. The west bank is high and cultivated in pine-apples, which are raised in great quantities at Eden and Jensen, pleasant towns about twenty miles south of Fort Pierce. Jensen is an excellent place to get drinking water, every house having a flowing artesian well of clear, cold water. A short distance south of Jensen you come to Sewall's Point, back of which is the St. Lucie River, a fine place for hunting, and to the east is Santa Lucia Inlet, or Gilbert's Bar. If the canal is closed between here and Lake Worth, you can go out of this inlet and go in again at Lake Worth Inlet, some forty miles to the south. This far south, being in the latitude of the Bahama Islands, the surf is usually very slight, so you can land nearly anywhere on the beach.

The canals are not likely to be closed, so you can, after passing Santa Lucia Inlet, enter the Jupiter Narrows, following the stakes carefully from Sewall's Point until well past the inlet. The mangrove trees in Jupiter Narrows are very large and shut off the breeze somewhat, but with a fair tide you are soon in Hobe Sound, where

there are some fine residences and many pineapple fields on the high sandhills forming the west shore. The sound is not over one-half mile wide and is well staked out to Jupiter, some six miles south. Jupiter lighthouse, a red brick tower, stands on a steep hill nearly one mile back from the inlet, which is too small for any craft but the boats of the life-saving station, which is on the beach nearby. The cable to Nassau, N. P., starts from here, and there is a United States weather signal station on the hill near the lighthouse. Jupiter is a picturesque spot and a fine place for fishing. Indians from the Everglades are to be seen here nearly every day, mostly hanging about the railroad station. From Jupiter to Lake Worth, about twelve miles, you will follow the canal, which pursues a nearly straight north and south course for the most part through saw grass marshes. Through this, with a fair wind, you will go flying, only if your boom is a long one it will sometimes stir up the grass and bushes on the canal bank. Should the wind be ahead and your boat without any motive power but sails, you

will have to be patient and wait. There are no toll charges through this canal, but at the entrance to Lake Worth it sometimes is choked up with quicksand; if the water is not too low you can worry over that somehow.

Entering Lake Worth, which is about thirty miles long by one and one-half wide, you see directly opposite Pitt's Island, which is a garden of tropical growth well worth a visit. Passing on south past Lake Worth Inlet, you soon come in sight of the great hotels at Palm Beach—the Royal Poinciana and the Palm Beach Inn—both on the east or Peninsula shore of Lake Worth. A railroad bridge, with a draw for vessels to pass, spans the lake from the hotels to West Palm Beach, where are situated several good hotels and numerous stores, post office, etc.

You will want to remain some time in this charming location, the finest winter resort anywhere in the United States. The hotels are surrounded by tall cocoanut trees and other tropical growth, rubber trees, poinciana trees, and a great variety of exotics brought here by Mr. Flagler, the owner of the East Coast system of hotels and

railroads. The writer has been in both the East and West Indies, and never saw a more tropical spot than the gardens and grounds of the Hotel Royal Poinciana. You can anchor or tie up to the boat landing directly in front of this great hotel, and never want for company—if the season is well begun. There are many fishermen at West Palm Beach drying their nets in the morning, and you can get fresh pompano every morning for breakfast if you like.

The lake shore north and south of the Poinciana Hotel is built up with costly residences with beautiful grounds, and a walk along the concrete bulk-head by the river is well worth taking. The ocean pier is a great resort for fishermen; the admission is ten cents, and the New York steamers enroute for Havana always pass very close by the end of the pier so as to avoid the Gulf Stream, which is close in from here up to past Jupiter.

Leaving Palm Beach, a run of about ten or twelve miles south, and you are at the end of Lake Worth. The entrance to the canal here is very muddy and great care

is necessary, but once out of the lake you are all right. There are many cocoanut groves about the south end of the lake, and it will be a good time to lay in a supply of green cocoanuts. The canal from here on is cut mostly through marshes, although there are some places where the banks are high, and others where the channel of some fresh water creek is followed where it is winding; you cannot miss the way, however. En route you pass Hillsborough Inlet, too small for anything but small boats, but a fine place to get shells on the ocean beach. For many miles you will scarcely see any habitation until you reach New River Sound. Here is a house of refuge on the ocean beach, and the keeper will direct you how to go up to Fort Lauderdale to the railroad station, where there is a store, hotel and post office and an Indian camp. Lauderdale is about two miles up a narrow, deep creek, and you had best get into your rowboat and row up and back. Down New River Sound, which is deep and narrow, some two miles, you will see the entrance to the last

section of the canal, with the toll-keeper's house. The toll is ten cents per foot for length over all.

Few ever pay, most every one having a pass. Directly opposite the canal is New River Inlet. This is a safe outlet for boats drawing under four feet, and as it is but twenty miles from here to Norris Cut, heading into Biscayne Bay, most boats go outside rather than bother with the canal.

The canal is all right, however, except a few mud banks and crooked channels in Snake Creek and Dumbfoundling Bay. The upper end of Biscayne Bay is shoal, but the water is so clear you can see the channel a long way ahead, and from this on to Key West, one hundred and seventy-five miles to the southwest, you have open water, protected to the south by the Florida reefs, the channel well buoyed out, and a shelter behind a sand bank or in between the Keys always near at hand. Water is hard to obtain on the Keys, so it is wise to fill up at Miami, which in winter is a busy town, with steamers every other day to Nassau, Havana and Key West. The

Royal Palm Hotel here is an imposing structure, standing on the point where the Miami Creek joins the bay, and is surrounded by cocoanut trees and tropical growth. The Keys are all very much alike, covered with a scrubby thicket of mangrove and other hard wood; there is good fishing and hunting among them, however. To anyone who likes cruising, there is nothing so pleasant as a trip from Daytona along the inside route to Miami. The best way is to procure a boat at Daytona, as any yacht suitable to make the long trip from the north to Florida would be entirely too deep for the shallow stretches along the east coast, and vice versa, the boat for these inside lagoons would make a very poor showing if caught out in the Atlantic in one of the fierce northers that sometimes sweep the coast in winter.

SOUTHERN NAVIGATION

YOUR article, "Inland Passage from Charleston, S. C., to St. John's River, Florida," was read by me with much pleasure, and I would like to add that the canal between Lake Worth and Jupiter is now open, having lately been dredged out. After entering Lake Worth steer for the middle of the Lake. Keep in the middle of the Lake till abreast of Flagler's houseboat at the inlet, then steer closer to the west shore, heading for Sherman's Point for about half of a mile, then steer east for quarter of a mile, then southwest through Rivena Channel, keeping close to the west side till you get abreast of Rivena House, then steer east till you get in the middle of the Lake; the deepest water is now on the east side of the Lake. You can hold this course till you

get to the drawbridge at Palm Beach. The water all around the inlet is perfectly clear, so that you can see all bars, excepting in a very heavy wind. The channel from Palm Beach to Miami is in first-class condition, as it has just been dredged out, and you can carry four feet all the way through. I write you this as there may be some yachtsmen who will want to go through to Miami this winter. I live at Stuart on the St. Lucie River at the drawbridge. The St. Lucie has an average depth of 12 feet, and it is a splendid piece of water to cruise on, being deep and 40 miles long. I will be glad to give yachtsmen any information they may desire when they are down this way.

STANLEY KITCHING.

Stuart, Florida, Sept. 1902.

CHARTS

BEAUFORT, N. C., TO BISCAYNE, FLA.

While it is not necessary to have the large scale charts, I advise the yachtsman to get a full set, as it will probably save him a deal of trouble, and the cost is very small.

148—Bogue Inlet to Old Topsail Inlet.

149—Old Topsail Inlet to Cape Fear.

422—New River Inlet.

150—Masonboro Inlet to Shallotte Inlet, including Cape Fear.

424—Cape Fear River Entrance to Reeves Point.

425—Cape Fear River, from Reeves Point to Wilmington.

151—Little River Inlet and Part of Long Bay.

152—From Murrell's Inlet to Cape Romain, including Winyah Bay.

153—North Island to Long Island, including Cape Romain.

428—Winyah Bay.

154—Long Island to Hunting Island

431—Charleston Harbor.

434—North Edisto River.

155—Hunting Island to Ossabaw Island.

435—Bull and Combahee Rivers.

436—St. Helena Sound.

437—Whale Branch, Inside Passage between Coosaw and Broad Rivers.

438—Beaufort River, Inside Passage between Port Royal and St. Helena Sounds.

571—Port Royal Sound.

156—Savannah to Sapelo Island.

440—Tybee Roads, Savannah River, and Wassaw Sound.

441—Ossabaw Sound.

443—St. Catharine's Sound.

444—Sapelo Sound.

157—Sapelo Island to Amelia Island.

446—Doboy and Altamaha Sounds.

447—St. Simon's Sound, Brunswick Harbor.

448—St. Andrew's Sound.

158—St. Mary's Entrance, Southward to Latitude 30° N.

453—Fernandina Entrance.

454*a*-St. John's River, Entrance to Jacksonville.

455*b*-Jacksonville to Hibernia.

455*c*-Hibernia to Racey's Point.

458—Lake Monroe to Lake Washington.

455*d*-Tocoi to San Mateo.

159—St. Augustine Inlet to Halifax River.

160—Halifax River to Mosquito Lagoon.

161—Cape Canaveral.

162—Cape Canaveral Southward to Latitude 27° 41′ N.

468—St. John's River, Palatka to Lake Monroe.

163—Latitude 27° 41′ N. to Jupiter Inlet.

164—Jupiter Inlet to Hillsboro Inlet.

165—Hillsboro Inlet to Fowey Rocks.

166—Key Biscayne to Carysfort Reef.

These charts cost from 20 to 50 cents apiece. Charts numbered from 148 to 166 are general charts and include the localities shown in charts numbered from 422 to 468, but on a small scale.

ATLANTIC COAST PILOT

New York to Chesapeake Bay.

Chesapeake Bay and Tributaries.

Chesapeake Bay Entrance to Key West.

Stebbins' Illustrated Coast Pilot.

Price of these books is 50 cents apiece. Every yacht should carry a set.

Price of Stebbins' Coast Pilot is $1.25.

LIST OF POINTS AT WHICH LAUNCH NAPHTHA CAN BE OBTAINED

STATIONS	PARTY OR PARTIES IN CHARGE
Port Chester, N. Y.	Geo. S. Bailie
Mamaroneck, N. Y.	C. M. Baxter
New Rochelle, N. Y.	Standard Oil Co. of N. Y.
City Island, N. Y.	T. A. Jewell
Ft. West 46th St., N. Y. C.	G. E. Southerland, S. O. Co. of N. Y.
Ft. East 120th St., N. Y. C.	Herman Moritz, S. O. Co. of N. Y.
Bond St., Brooklyn, N. Y.	Standard Oil Co., of N. Y.
N. 10th St. " " "	G. E. Southerland, S. O. Co. of N. Y.
Ft. N. 12th St. " " "	S. O. Co. of N. Y. Pratt Works
New Brighton, S. I	I. L. Place, S. O. Co. of N. Y.
Port Washington, L. I.	Manhassett Bay Yacht Club
Cold Spring Harbor, L. I.	D. Abrams
Greenport, L. I.	W. W. Griffin
Oyster Bay, L. I.	Seawanhaka Yacht Club

Northport, L. I.	S. H. Lowndes
Eatons Neck, L. I.	White Star Gravel Co.
Glenwood Landing, L. I.	Hempstead Harbor Gasolene Engine Manufacturing Co.
Lloyds Neck, L. I.	Thomas & Eckerson
Barren Island, N. Y.	John Grimm
Keyport, N. J.	T. S. R. Brown
Atlantic Highlands, N. J.	W. H. Posten
Seabright, N. J.	B. Johnson
Manasquan, N. J.	Ira Johnson
Atlantic City, N. J.	R. L. Gardner, Agent
Cape May, N. J.	Daniel Focer Agent
Bridgeton, N. J.	G. A. Johnson, Agent
Burlington, N. J.	Chas. Gillece, Agent
Camden, N. J.	Ben Lawton, Agent
Pennagrove, N. J.	Ben Lawton, Agent
Salem, N. J.	G. A. Johnson, Agent
Trenton, N. J.	R. H. Beeman, Agent
Milford, Dela.	J. C. Hall, Agent
Wilmington, Dela	O. C. Purdy, Agent
Dover, Dela.	C. C. Sullivan, Agent
Clayton, Dela.	C. C. Sullivan, Agent
Point Breeze, Phila., Pa.	W. S. Rhinehart, Agent

Bristol Pa. . . . . G. W. Headley, Agent
Chester, Pa. . . . . O. C. Purdy, Agent
Betterton, Md. . . . . Owens & Co.
Cristfield, Md. . . . . N. W. Tawes & Son
Baltimore, Md. . . . . I. G. West, Special Agent
Havre de Grace, Md. . . . . O. R. Currier, Agent
Chestertown, Md. . . . . George R. Rouse, Agent
Annapolis, Md. . . . . E. Gauss, Agent
Centreville, Md. . . . . Wright, McKenny & Lowe, Ag'ts
Chesapeake City, Md. . . . . Bennett Steele, Agent
Easton, Md. . . . . W. D. Sparks, Agent
Cambridge, Md. . . . . Geo. W. Woolford, Agent
Salisbury, Md. . . . . U. D. Deibler, Agent
Pocomoke, Md. . . . . J. F. Gibbons, Agent
Jacksonville, Fla. . . . . D. T. Gerrow, Special Agent
St. Augustine, Fla. . . . . Eugene Masters, Agent
Dayton, Fla. . . . . J. W. Wilkinson, Agent
Titusville, Fla. . . . . R. W. Joyner, Agent
Cocoa, Fla. . . . . S. F. Travis & Co.
West Palm Beach, Fla. . . . . George Wellington, Agent
Miami, Fla. . . . . R. A. Coachman, Agent
Key West, Fla. . . . . W. L. Bates Agent
Sandford, Fla. . . . . Geo. H. Fernald

GULF PORTS

Fort Myers, Fla.	Evans & Co., Myers, Fla.
Punta Gorda, Fla.	R. L. Earnest, Agent
Tampa, Fla.	M. E. Gerow, Agent

Savannah, Ga.	E. S. Player, Special Agent
Brunswick, Ga.	J. S. M. Symons, Agent
Richmond, Va.	J. M. Walker, Special Agent
Norfolk, Va.	W. W. Zachry, Special Agent
Hampton, Va.	T. C. Sparkman, Agent
Newport News, Va.	G. W. Bancroft, Agent
Alexandria, Va.	W. T. Beans, Agent
Suffolk, Va.	W. B. Ferguson & Co., Agents
Elizabeth City, N. C.	N. G. Grandy, Agent
Mantec, N. C.	L. D. Tarkington
Beaufort, N C.	W. F. Dill, Agent
Morehead City, N. C.	M. S. Webb, Agent
Newberne, N. C.	J. T. Hollister, Agent
Wilmington, N. C.	W. R. Barkdale, Special Agent
Greenville, N. C.	E. A. White, Agent
Washington, N. C.	J. B. Moore & Sons, Agents
Charleston, S. C.	F. E. Whitelaw, Agent
Washington, D. C.	Geo. E. Parselles, Agent

ON YACHTS and YACHT HANDLING

By THOMAS FLEMING DAY

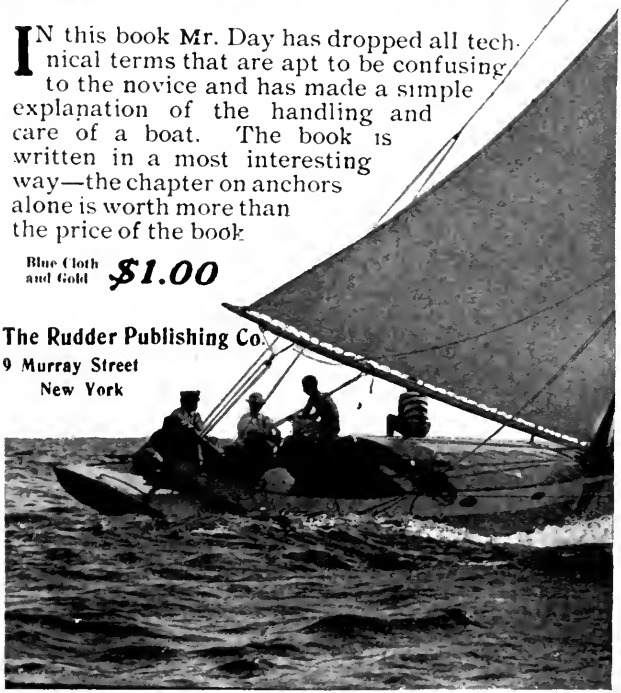
CONTENTS

On Seamanship	On Seagoing Boats	On Anchors and Anchoring
On Boats in General	On Sails as an Auxiliary	On Rigging
On One-Man Boats	On Reefing	On Stranding

IN this book Mr. Day has dropped all technical terms that are apt to be confusing to the novice and has made a simple explanation of the handling and care of a boat. The book is written in a most interesting way—the chapter on anchors alone is worth more than the price of the book

Blue Cloth and Gold **$1.00**

The Rudder Publishing Co.
9 Murray Street
New York



Send postal for Catalogue of How-To Books and Yachtsman's Library.

YACHTSMAN'S LIBRARY

Yacht Etiquette

WHAT TO DO AND HOW TO DO IT

A NEW BOOK

By CAPTAIN HOWARD PATTERSON

IT CONTAINS

Exhaustive chapters on yacht discipline, ceremonies and courtesies for any and all circumstances.

A full treatise on the duties and responsibilities of yacht officers, from the captain down.

Observances in detail for the reception of presidents of republics, royalty, nobility, governors, members of the cabinet, diplomatic corps, army and navy officials, and other distinguished visitors; colors in general; salutes; harbor and sea routine, etc., etc.

Red marginal notes afford means of immediate reference to any subject requiring to be dealt with on the spur of the moment.

Captains should not only provide for themselves, but should furnish one of these books to each and every officer on board of their yachts, so that sailing masters, mates, engineers, quartermasters, etc., may familiarize themselves with those sections which deal with matters in their respective departments.

A book that is as necessary and as applicable in parts for the small yacht as for the palatial pleasure craft.

Beautifully printed and bound, and of convenient size for the pocket.

WILL BE MAILED, POSTPAID, UPON RECEIPT OF PRICE, **$1**

THE RUDDER PUBLISHING COMPANY

9 MURRAY STREET, NEW YORK

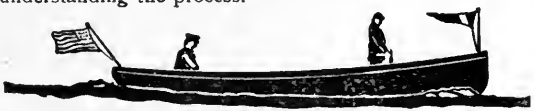
Send postal for Catalogue of How-To Books and Yachtsman's Library.

How to Build a Motor Launch

By C. D. Mower
Designing Editor of THE RUDDER

A simple and practical work in every detail, showing how to construct a launch hull suitable for use with any description of motor.

Each step of the work is clearly and thoroughly explained, both by text and drawings, so that a man who has never even seen a boat built will have no difficulty in understanding the process.



The author, a self-taught boat builder, thoroughly comprehends what a novice does not know, and is, therefore, able to point out the hard places, and to show the amateur builder how to get over or around them.

In the after part of the book are given the designs of several launches, from 18 to 50 feet in length.

The whole is heavily illustrated, and is the most complete treatise on launch building yet published.

THE RUDDER PUB. CO.
9 Murray St. New York, U. S. A.

Bound in cloth, price $1
Same size and style as "How to Build a Skipjack" and "How to Build a Racer for $50"

When possible, please remit by Express Money Order

Send postal for Catalogue of How-To Books and Yachtsman's Library.

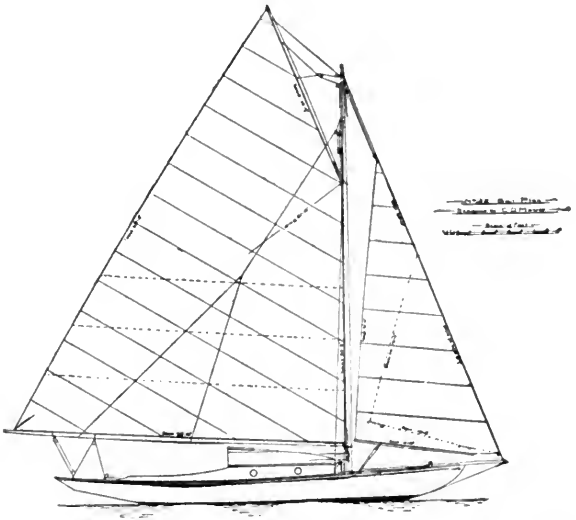
YACHTSMAN'S LIBRARY

How To BUILD A KNOCKABOUT

The most wholesome type of boat for all-around cruising and racing. Stanch, fast and powerful. Easily handled by one man. Full working drawings and plans, with descriptive illustrations and instructions for building.

BOUND IN CLOTH, $1.00

Uniform in style with How to Build a Skipjack



THE RUDDER PUBLISHING COMPANY

9 MURRAY STREET, NEW YORK

Send postal for Catalogue of How-To Books and Yachtsman's Library.

HOW TO BUILD A SKIPJACK

Complete plans and directions for building a 19-ft. sloop, the material for which will cost less than $100; and pictures of numerous boats that have been built in all parts of the world from these plans. Bound in blue cloth and gold, uniform with "How to Build a Racer for $50."

PRICE ONE DOLLAR POSTPAID

THE RUDDER PUBLISHING COMPANY

9 Murray Street, New York

Send postal for Catalogue of How-To Books and Yachtsman's Library.

YACHTSMAN'S LIBRARY

HOW TO BUILD A RACING SLOOP

THE WIDE-WORLD WINNING SWALLOW

DESIGNED BY C. D. MOWER

MOST successful small racing machine ever designed. Been built in every clime; has won on every sea. A prize-winner in America, Europe, Asia and Australia. Has defeated boats designed by Herreshoff, Gardner, Payne, and a host of other designers.

Easy to build and easy to win with. Has been a success wherever tried. No trouble to build if directions are followed. Materials cost about $100; sometimes less. Book contains full set of plans and story of what Swallows have done. Cannot be beaten for the price; cannot be beaten for any price.

Bound in Cloth, Price $1.00

Uniform in style with How to Build a Skipjack

Address THE RUDDER PUB. CO., 9 Murray St, N. Y.

Send postal for Catalogue of How-To Books and Yachtsman's Library.

YACHTSMAN'S LIBRARY

THE second volume of a series of technical books that will be an invaluable addition to every yachtsman's library.

ON

MARINE MOTORS

AND

MOTOR LAUNCHES

By E. W. ROBERTS, M. E.

Author of the GAS ENGINE HANDBOOK

A REPRINT of the excellent articles contributed to THE RUDDER during 1900, and which attracted the attention of gas-engine builders and gas-engine users throughout the world. Every motor boatman should have a copy: it will save him money, time and bother.

PRICE

$1.00

BOUND IN CLOTH

Address **THE RUDDER PUBLISHING CO., 9 Murray St., Franklin Building, N. Y.**

WHEN POSSIBLE, PLEASE REMIT BY EXPRESS MONEY ORDER

Send postal for Catalogue of How-To Books and Yachtsman's Library.

How to Build a Racer for $50

SIMPLEST, safest and fastest boat that can be built. The working plans are such that a boy can build from them. The plans were published in 1898, and since then some 500 boats have been built from them. The book has numerous illustrations of boats in and after construction, and also gives experience of builders in allparts of the world. Blue cloth and gold, uniform with "How to Build a Skipjack." PRICE, POSTPAID, $1.00.

THE RUDDER PUBLISHING COMPANY, 9 Murray Street, New York.

Send postal for Catalogue of How-To Books and Yachtsman's Library.

UNIVERSITY OF CALIFORNIA LIBRARY
Los Angeles
This book is DUE on the last date stamped below.

Form L9—15*m*–10,'48(B1039)444

LOS ANGELES

UC SOUTHERN REGIONAL LIBRARY FACILITY
A 001 338 294 0

F106
S72